

IN THE CLAIMS:

Please CANCEL without prejudice or disclaimer claims 1-16 in the underlying PCT application, including any amendments under Article 19 or 34 and ADD new claims 17-31 in accordance with the following:

Claims 1-16 (cancelled)

17. (new) A method for synchronizing a radio communication system divided into radio cells transmitting data by multiple access methods, each radio cell having a base station for radio provisioning mobile stations assigned to the radio cell, comprising:

receiving, at the base station of a radio cell, mobile station signals of the radio cell and adjacent radio cells;

determining, from the mobile station signals received at the base station, a first synchronizing value for at least one of time synchronizing and frequency synchronizing to which the base station synchronizes itself;

receiving, at a mobile station of the radio cell, base station signals of the radio cell and adjacent radio cells; and

determining, from the base station signals received at the mobile station, a second synchronizing value for at least one of time synchronizing and frequency synchronizing to which the mobile station synchronizes itself.

18. (new) The method according to claim 17, wherein adjacent base stations employ radio transmission resources from a stock commonly assigned to the base stations for data transmission.

19. (new) The method according to claim 18, wherein the base stations employ timeslots of commonly assigned carrier frequencies as radio transmission resources.

20. (new) The method according to claim 19,
wherein at least two adjacent base stations simultaneously and jointly employ a timeslot of a carrier frequency for radio provisioning a respectively assigned mobile station, and
further comprising selecting the timeslot from the commonly assigned radio transmission resources taking account of an interference situation in the timeslot.

21. (new) The method according to claim 20, further comprising synchronizing by at least one of the base station and mobile station by adjusting carrier frequencies and timeslot-transmitting instants.

22. (new) The method according to one claim 21, further comprising reducing co-channel interference on at least one of the base station and mobile station by interference suppression methods.

23. (new) The method according to claim 22, further comprising assigning radio transmission resources on the base station side to minimize co-channel interference in adjacent radio cells.

24. (new) The method according to claim 23, wherein an orthogonal frequency division multiplexing radio transmission method is employed.

25. (new) The method according to claim 24 wherein one of a time-division duplex and frequency-division duplex radio transmission method is employed.

26. (new) The method according to claim 24, further comprising determining one of a time deviation through correlating and a frequency deviation by ascertaining a phase rotation of consecutive symbols following a transformation into the frequency range.

27. (new) The method according to claim 26, wherein said synchronizing of the base station and the mobile station of the radio communication system requires no additional signaling using a higher protocol layer between the base station and assigned mobile station.

28. (new) A base station, in a radio cell of a radio communication system divided into radio cells transmitting data by multiple access methods, for radio provisioning mobile stations assigned to the radio cell, comprising:

a receiver receiving mobile station signals of the radio cell and adjacent radio cells; and
a processor determining from the mobile station signals, a synchronizing value for at least one of time synchronizing and frequency synchronizing to which said base station synchronizes itself.

29. (new) A mobile station, in a radio cell of a radio communication system divided into radio cells transmitting data by multiple access methods, each radio cell having a base station for radio provisioning mobile stations assigned to the radio cell, comprising:

a receiver receiving base station signals of the radio cell and adjacent radio cells; and
a processor determining from the base station signals, a synchronizing value for at least one of time synchronizing and frequency synchronizing to which said mobile station synchronizes itself.

30. (new) A radio communication system divided into radio cells transmitting data by multiple access methods, each radio cell having a base station for radio provisioning mobile stations assigned to the radio cell, comprising:

at least one base station, each assigned to a corresponding radio cell, receiving mobile station signals of the corresponding radio cell and adjacent radio cells and determining, from the mobile station signals, a synchronizing value for at least one of time synchronizing and frequency synchronizing of the at least one base station.

31. (new) A radio communication system divided into radio cells transmitting data by multiple access methods, each radio cell having a base station for radio provisioning mobile stations assigned to the radio cell, comprising:

at least one mobile station, each in a corresponding radio cell, receiving base station signals of the corresponding radio cell and adjacent radio cells and determining, from the base station signals, a synchronizing value for at least one of time synchronizing and frequency synchronizing of the at least one mobile station.